AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A linear recording medium, for use with a recording drive designed to read pairs of non-parallel servo transitions having a substantially non-zero azimuth angle, and no modulation of distance between immediately adjacent pairs of non-parallel servo transitions on the medium, comprising a series of pairs of parallel servo transitions, wherein for each of the pairs of non-parallel servo transitions there is a corresponding pair of parallel servo transitions. at a zero azimuth angle.

Claim 2 (Currently amended): The medium of claim 1, further comprising modulated distances between adjacent pairs of non-parallel servo transitions as a function of location of the pairs of non-parallel servo transitions on the medium, the modulated distances being encoded to define position error signals such that a drive designed to expect essentially no modulated distances between adjacent parallel servo transitions on the medium will generate the position error signals.

Claim 3 (Original):   The medium of claim 1, in which the linear recording medium is a magnetic recording medium.

Claim 4 (Original):   The medium of claim 1, in which the linear recording medium is a tape recording medium.

Claim 5 (Currently amended): The medium of claim 1, in which the transitions of the pairs of parallel servo transitions define second series has a roughened gap edge profiles.

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Claim 6 (Currently amended): The medium of claim 5, in which the roughened gap edge profiles define has-peak-to-peak roughening amplitude, A, equal to $\left(\dfrac{T_W}{2}\right)\tan\theta$, where θ is a slant angle and the profile has a cross track wavelength λ approximately equal to a servo read head track width T_w.

Claim 7 (Currently amended): A system for intentionally generating position error signal in a data recording drive designed to read only-pairs of non-parallel servo transitions having a-substantially non-zero azimuth angle and no modulation of distance between immediately adjacent pairs of non-parallel servo transitions on the medium, comprising in combination:

    a) a linear recording medium comprising pairs of parallel servo transitions-at-a-zero azimuth-angle, wherein for each of the pairs of non-parallel servo transitions there is a corresponding pair of parallel servo transitions; and

    b) a servo read head connected to the drive to read at least one of the pairs of parallel servo transitions and the pairs of non-parallel servo transitions.

Claim 8 (Currently amended): The system of claim 7, in which the medium further comprises modulated distances between adjacent pairs of non-parallel servo transitions as a function of location of the pairs of non-parallel servo transitions on the medium, the modulated distances being encoded to define position error signals such that a drive designed to expect essentially no modulated distances between adjacent parallel servo transitions on the medium will generate the position error signals.

Claim 9 (Currently amended): The system of claim 7, in which the transitions in the pairs of parallel servo transitions at-a-zero-azimuth-angle-have-a- define roughened gap edge profiles.

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Claim 10 (Currently amended): The system of claim 9, in which the roughened gap edge profiles define has peak-to-peak roughening amplitude, A, equal to $\left(\dfrac{T_W}{2}\right)\tan\theta$, where θ is a slant angle and the profile has a cross track wavelength λ approximately equal to a servo read head track width T_w.

Claim 11 (Currently amended):   A method of evaluating performance of a linear recording drive designed to read pairs of non-parallel servo transitions having a substantially non-zero azimuth angle without modulation of distance between immediately adjacent pairs of non-parallel servo transitions on a linear recording medium compatible with the drive, comprising:

    a)   providing a linear recording medium, upon at least a portion of which are:

        (i) first pairs of non-parallel servo transitions at a non-zero azimuth angle; and

        (ii) for each of the first pairs of non-parallel servo transitions, corresponding second pairs of parallel servo transitions at a zero azimuth angle; and

    b)   using the drive to read position error signal from the first pairs of non-parallel servo transitions at each transverse location on the medium;

    c)   comparing the position error signal to an expected value;

    d)   using the drive to read system noise from the second pairs of parallel servo transitions; and

    e)   comparing the system noise to an expected value.

Claim 12 (Currently amended): The method of claim 11, in which the transitions in the second pairs of parallel servo transitions at a zero azimuth angle have define a roughened gap edge profiles.

Claim 13 (Currently amended): The method of claim 12, in which the roughened gap edge profiles define has peak-to-peak roughening amplitude, A, equal to $\left(\dfrac{T_w}{2}\right)\tan\theta$, where θ is a slant angle and the profile has a cross track wavelength λ approximately equal to a servo read head track width T_w.

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